

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-008409**Date Inspected:** 13-Aug-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Chen Xi**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG sub assemblies and crossbeams**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance Inspector (QA) Steve Hall was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA observed and/or found the following:

OBG assembly bay 1

No significant work was observed in this bay during the time this QA was present.

OBG assembly bay 2

This QA observed ZPMC qualified welding personnel identified as 062438 perform FCAW welding on OBG floorbeam weld joint identified as FB3084-001-031. ZPMC QC identified as Mr. Zhong Yaxu was present to monitor the welding process. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-B-T-2231-B-U2-F-1.

This QA observed ZPMC qualified welding personnel identified as 207237 perform SAW welding on OBG floorbeam weld joint identified as FB3001-001-021. ZPMC QC identified as Mr. Zhong Yaxu was present to monitor the welding process. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-B-T-2221-B-L2c-S-2.

This QA observed ZPMC qualified welding personnel identified as 207464 perform SMAW tack welding on OBG floorbeam identified as FB3003-002. ZPMC QC identified as Mr. Zhong Yaxu was present to monitor the welding process. The welding parameters as measured using QC's calibrated instruments appeared to be in general

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compliance with WPS-B-P-2112.

OBG assembly bay 3

No significant work was observed in this bay during the time this QA was present.

OBG assembly bay 5

During random in process inspection of the bike path cantilever brackets this QA observed excessive root openings between backing bar strips at the corner of several of the brackets. This QA measured one of the openings at 13mm. This exceeds the maximum root opening of 5mm for Complete Joint Penetration (CJP) welds as specified in AWS D1.5 2002. See attached photos.

During random in process inspection of crossbeam CB11 this QA observed excessive root openings where the deck panel stiffeners pass through the floorbeam diaphragms. This condition exists at a number of locations in this crossbeam. This QA measured one of the openings at 13mm. This exceeds the maximum root opening of 5mm for Complete Joint Penetration (CJP) welds as specified in AWS D1.5 2002. See attached photos.

Due to the absence of QC in this bay during the time this QA was present, this QA was unable to communicate with the contractors QC concerning these issues. This QA informed Caltrans QA task leader via email of the above mentioned issues in order that dayshift QA inspectors may follow up and communicate this QAs concerns to the contractors QC inspectors.

OBG assembly bay 6

No significant work was observed in this bay during the time this QA was present.

OBG assembly bay 8

No significant work was observed in this bay during the time this QA was present.

OBG assembly bay 9

No significant work was observed in this bay during the time this QA was present.

OBG crossbeams CB5 through CB15

No significant work was observed on any of these crossbeams during the time this QA was present.

Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.

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## Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang (15000422372), who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Hall,Steven	Quality Assurance Inspector
<b>Reviewed By:</b>	Prue,Erik	QA Reviewer

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